



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,624	06/26/2006	Stephane Moreau	17258/002001	5504

22511 7590 06/11/2010  
OSHA LIANG L.L.P.  
TWO HOUSTON CENTER  
909 FANNIN, SUITE 3500  
HOUSTON, TX 77010

EXAMINER
----------

COMLEY, ALEXANDER BRYANT

ART UNIT	PAPER NUMBER
----------	--------------

3746

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

06/11/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com  
buta@oshaliang.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,624	<b>Applicant(s)</b> MOREAU ET AL.	
	<b>Examiner</b> ALEXANDER B. COMLEY	<b>Art Unit</b> 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/1/2010</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 1<sup>st</sup>, 2010 has been entered.

### ***Claim Rejections - 35 USC § 102***

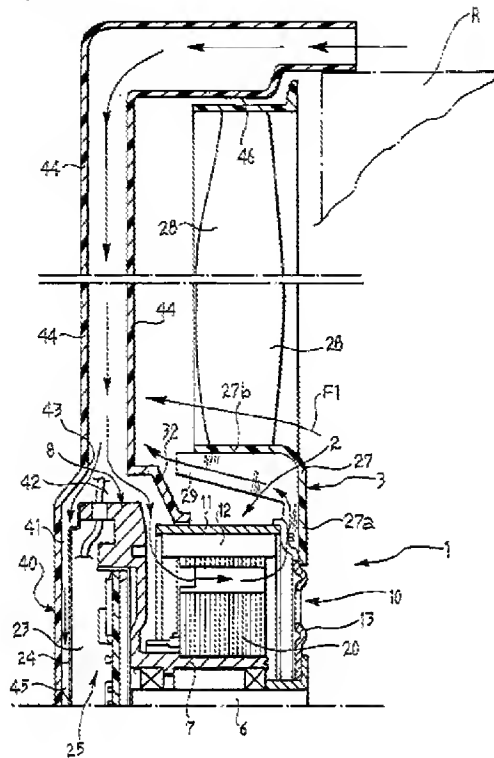
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-18** are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 6,384,494 to Avidano et al. directed to a Motor-Driven Fan, Particularly for A Motor Vehicle Heat Exchanger.

FIG. 3



In regards to Independent **Claim 1**, and with particular reference to Figure 3 shown immediately above, Avidano discloses:

(1) A ventilation device (1) comprising a fan (3) capable of being driven rotationally by an open electric motor (2) which is firmly attached to a support (40, 44) intended for fixing said ventilation device, the fan consisting of a plurality of blades (28) which are distributed regularly around a bowl (27) inside which there are arranged internal ribs (29) capable of ventilating said open electric motor, characterized in that the support comprises a central part (32) which is connected in a substantially sealed manner to at least one peripheral portion (11) of the open electric motor, the central part of the support comprising a hole (41,

42) configured to receive, at least partially, said motor, and wherein said central part of the support is configured to hold said motor.

As shown in Figure 3 above, Avidano et al. discloses an electric motor-driven fan unit for use in motor vehicles. Avidano's fan is designed with a hub and airflow structure that allows the fan's internal blades to cool the motor. In particular, Avidano states "A motor-driven fan includes an electric motor including a rotor and a stator in which the rotor includes an essentially cup-shaped cap which extends at least partly around the stator and has a plurality of lateral exit openings adjacent the bottom wall, and an impeller or fan including a hollow hub from which extends a plurality of main outer fan blades. This hub has a front wall fixed to the back wall of the cap of the rotor and a lateral skirt which surrounds the lateral wall of the cap in a radially spaced relationship. The hub is further provided with inner ventilation blades acting in operation to generate a cooling air stream which passes through the motor." (Abstract) Moreover, Avidano specifically describes the hub structure of Applicant's claimed invention by stating "The fan or rotor 3 of the motor-driven fan comprises a hollow hub 27 (FIG. 1) from which extends a plurality of main outer fan blades 28. The hub 27 has a front wall 27a fixed to the radial projections 15 of the disc element 13 of the cap 10, by means of rivets 29 or the like (FIG. 1). The hub 27 of the fan 3 further has a lateral, essentially cylindrical, skirt 27b which surrounds the side wall or ring 11 of the cap 10 in a radially spaced relation thereto. As is seen in FIG. 1, the hub 27 of the fan 3 is further provided, in the space 30 defined between the ring 11 of the cap 10 and the skirt 27b of the hub of

Art Unit: 3746

the fan with internal fan blades 29 which extend in respective inclined planes with respect to the radial direction.” (Column 2, Lines 36-48) Avidano discloses a support structure (40, 44, 32) that is composed of rear body 40, aspiration duct 44, and annular separator element 32. These three structures make up a rear-end support that supports the motor 2 via an opening (41, 42) (i.e. hole) within the central support 32. As shown in Figure 3, central support 32 surrounds the outer periphery 11 of the motor 2 and is substantially sealed thereto such that the motor is substantially sealed and supported within the support 32. In particular, Avidano states "In the embodiment of FIG. 3 a rear body 40 is fixed to the stator body 8 on the side opposite the fan 3, which extends in facing and spaced relationship with respect to the cover 24 and which surrounds the periphery of the stator body 8 lying close the annular separator element 32.” (Column 3, Lines 42-45) Avidano goes on to disclose a physical connection between the element 32 and the motor stator (i.e. supporting the motor) by stating, "Conveniently, although not necessarily, the motor-driven fan 1 further includes a separator ring 32 (FIG. 1) of essentially conical form, disposed around the end of the cylindrical wall 11 of the cap 10 facing the stator body 8 as well as around the ends of the cooling fins 26 of this stator body facing the fan. The separator ring 32 the function of which will be described hereinafter, can be fixed to the stator body 8 in various known ways." (Col. 2, Lines 54-61) And finally, Avidano describes a substantial sealing function provided by the element 32 in stating "This air stream discharges out by passing between the rear edge of the skirt 27b of the hub 27 of the fan and the annular separator element 32. This latter acts to impede mixing of the air stream entering the

Art Unit: 3746

electric motor 4 with the air stream leaving it, as well as impeding the ingress of extraneous bodies or atmospheric agents into the electric motor." (Col. 3, Lines 17-24)

Clearly from this disclosure, support 32 supports the motor within the opening (41, 42) and is substantially sealed to the motor since it acts to precisely control the airflow paths to prevent mixing thereof, as well as prevent ingress of harmful substances to the motor.

4. In regards to dependent **Claims 2-5 & 15**, the annular separator element 32 forms an opening (41, 42) (i.e. hole) that surrounds and holds the outer periphery of the motor element 2. Moreover, it can be seen in Figure 3 that the inner edge of separator element 32 cooperates with the annular wall of the motor in a continuous, contiguous fashion, while the cover 24 cooperates with the rear portion of the motor. In particular, Avidano states "The portion of the rear body 40 facing the cover 24 of the stator is conveniently provided with at least one projection 45 in contact with this cover for the purpose of reducing or cancelling the effects of vibration." (Column 3, Lines 52-55) In regards to dependent **Claims 6-10**, it can be seen in Figure 3 that a blind hole, which surrounds and holds the rear portion of the electric motor, is formed between the annular separator element 32 and the cover 24. This opening (or hole) is attached to the rear part of the motor by tight fitting, and forms a plate around the rear portion of the motor. Regarding dependent **Claims 11-14**, the annular separator element 32 forms a surface opposite the bottom of the hub (i.e. bowl) that directs airflow from the inside of the hub to the outside of the hub (See Figure 3). Moreover, the separator has a

Art Unit: 3746

concave shape (a quarter of a circle) that is flat, extends discontinuously (as its contour changes), and extends substantially linearly at a portion thereof. Finally, in regards to dependent **Claims 16-18**, Avidano's fan contains a peripheral part 44 that forms a frame with the central part. Moreover, Avidano's fan is for use in both an engine cooling device, as well as a motor vehicle. In particular, Avidano states "The rear body 40 may advantageously be formed integrally with a support structure to which the motor-driven fan 1 is fixed and defining a passage 46 for conveying the air stream caused in operation by the main blades 28 of the fan. In this case the aspiration duct 44 can be formed at least partly in a spoke of this support and conveying structure. In the case of a motor-driven fan associated with a radiator R the inlet aperture of the aspiration duct 44 is conveniently situated outside the boundary of this radiator R." (Column 3, Lines 59-67)

### ***Response to Arguments***

5. Applicant's arguments filed June 1<sup>st</sup>, 2010 have been fully considered but they are not persuasive. The Examiner's responses can be seen below.

6. In regards to Applicant's arguments regarding the supports (40, 44) not supporting the motor, the Examiner must respectfully disagree. As shown in Figure 3 above, the entire support structure is composed of rear body 40, aspiration duct 44, and central ring 32 (which forms hole 41, 42). These structures are formed as a single, integral piece, which is indicated by the crosshatching in the figure. With reference to



Art Unit: 3746

Figure 4, Avidano shows that rear body 40 is fixed (i.e. supports) the stator body 8, which is a primary structure of the motor 2. Avidano discloses this supporting function of the body 40 by stating "In the embodiment of FIG. 3 a rear body 40 is fixed to the stator body 8 on the side opposite the fan 3, which extends in facing and spaced relationship with respect to the cover 24 and which surrounds the periphery of the stator body 8 lying close the annular separator element 32." (Col. 3, Lines 41-46) Avidano goes on to say "The rear body 40 may advantageously be formed integrally with a support structure to which the motor-driven fan 1 is fixed and defining a passage 46 for conveying the air stream caused in operation by the main blades 28 of the fan. In this case the aspiration duct 44 can be formed at least partly in a spoke of this support and conveying structure. In the case of a motor-driven fan associated with a radiator R the inlet aperture of the aspiration duct 44 is conveniently situated outside the boundary of this radiator R." (Col. 3, Lines 59-67) It can easily be seen in Figure 4 that the motor is supported by the distal end of the support ring 32 such that motor is held at one end by ring 32 and by radiator R at its opposite end. The Examiner must assert that Figure 3 and Avidano's disclosure makes it clear that the supporting body (40, 44, 32) provides a supporting function to the motor, and has ring 32 (which forms motor hole 41, 42) formed integrally at the center thereof.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER B. COMLEY whose telephone number is

Art Unit: 3746

(571)270-3772. The examiner can normally be reached on M-F 7:30am - 5:00am EST (Alternate Fridays Off). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon C. Kramer can be reached on (571)-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander B Comley/  
Examiner, Art Unit 3746

/Charles G Freay/  
Primary Examiner, Art Unit 3746

ABC